

Connecting via Winsock to STN

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LOGINID: SSSPTA1623PAZ

PASSWORD :

TERMINAL (ENTER 1, 2, 3, OR ?):2

Enter NEWS followed by the item number or name to see news on that specific topic.

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FILE 'HOME' ENTERED AT 07:31:53 ON 06 MAY 2005

FILE 'REGISTRY' ENTERED AT 07:32:08 ON 06 MAY 2005
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Property values tagged with IC are from the ZIC/VINITI data file provided by InfoChem.

STRUCTURE FILE UPDATES: 4 MAY 2005 HIGHEST RN 849790-35-8
DICTIONARY FILE UPDATES: 4 MAY 2005 HIGHEST RN 849790-35-8

New CAS Information Use Policies, enter HELP USAGETERMS for details.

TSCA INFORMATION NOW CURRENT THROUGH JANUARY 18, 2005

Please note that search-term pricing does apply when conducting SmartSELECT searches.

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*****
* The CA roles and document type information have been removed from *
* the IDE default display format and the ED field has been added, *
* effective March 20, 2005. A new display format, IDERL, is now *
* available and contains the CA role and document type information. *
*****
*****
```

Crossover limits have been increased. See **HELP CROSSOVER** for details.

Experimental and calculated property data are now available. For more information enter HELP PROP at an arrow prompt in the file or refer to the file summary sheet on the web at:
<http://www.cas.org/ONLINE/DBSS/registryss.html>

-> e methyl formate/cn

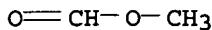
E1	1	METHYL FLUOSULFONATE/CN
E2	1	METHYL FLURBIPROFEN/CN
E3	1	--> METHYL FORMATE/CN
E4	1	METHYL FORMATE CATION RADICAL/CN
E5	1	METHYL FORMATE COMPD. WITH THIONYL CHLORIDE (1:1)/CN
E6	1	METHYL FORMATE CONJUGATE MONOACID/CN
E7	1	METHYL FORMATE HYDRATE/CN
E8	1	METHYL FORMATE RADICAL CATION/CN
E9	1	METHYL FORMATE SYNTHASE/CN
E10	1	METHYL FORMATE-BORON TRICHLORIDE COMPLEX (1:1)/CN
E11	1	METHYL FORMATE-CARBONYL-18O/CN
E12	1	METHYL FORMATE-D4/CN

=> e3
L1 1 "METHYL FORMATE"/CN

⇒ d 11

L1 ANSWER 1 OF 1 REGISTRY COPYRIGHT 2005 ACS on STN
RN 107-31-3 REGISTRY
ED Entered STN: 16 Nov 1984
CN Formic acid, methyl ester (6CI, 8CI, 9CI) (CA INDEX NAME)
OTHER NAMES:
CN Methanoic acid methyl ester
CN Methyl formate

CN Methyl methanoate
CN R 611
FS 3D CONCORD
MF C2 H4 O2
CI COM
LC STN Files: AGRICOLA, ANABSTR, BEILSTEIN*, BIOBUSINESS, BIOSIS,
BIOTECHNO, CA, CAOLD, CAPLUS, CASREACT, CBNB, CEN, CHEMCATS,
CHEMINFORMRX, CHEMLIST, CHEMSAFE, CIN, CSCHEM, CSNB, DETHERM*, DIPPR*,
EMBASE, ENCOMPLIT, ENCOMPLIT2, ENCOMPPAT, ENCOMPPAT2, GMELIN*, HODOC*,
HSDB*, IFICDB, IFIPAT, IFIUDB, MEDLINE, MRCK*, MSDS-OHS, NAPRALERT,
NIOSHTIC, PDLCOM*, PIRA, PROMT, PS, RTECS*, SPECINFO, TOXCENTER, TULSA,
ULIDAT, USPAT2, USPATFULL, VTB
(*File contains numerically searchable property data)
Other Sources: DSL**, EINECS**, TSCA**
(**Enter CHEMLIST File for up-to-date regulatory information)



PROPERTY DATA AVAILABLE IN THE 'PROP' FORMAT

4174 REFERENCES IN FILE CA (1907 TO DATE)
15 REFERENCES TO NON-SPECIFIC DERIVATIVES IN FILE CA
4177 REFERENCES IN FILE CAPLUS (1907 TO DATE)
133 REFERENCES IN FILE CAOLD (PRIOR TO 1967)

=> file caplus	SINCE FILE	TOTAL
COST IN U.S. DOLLARS	ENTRY	SESSION
FULL ESTIMATED COST	6.87	7.08

FILE 'CAPLUS' ENTERED AT 07:32:53 ON 06 MAY 2005
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FILE COVERS 1907 - 6 May 2005 VOL 142 ISS 19
FILE LAST UPDATED: 4 May 2005 (20050504/ED)

New CAS Information Use Policies, enter HELP USAGETERMS for details.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> l1/prep
4179 L1
3299000 PREP/RL
L2 833 L1/PREP
(L1 (L) PREP/RL)

=> carbon monoxide

1117063 CARBON
24819 CARBONS
1126102 CARBON
(CARBON OR CARBONS)
166121 MONOXIDE
973 MONOXIDES
166636 MONOXIDE
(MONOXIDE OR MONOXIDES)
L3 140565 CARBON MONOXIDE
(CARBON (W) MONOXIDE)

=> methoxide
11064 METHOXIDE
393 METHOXIDES
L4 11230 METHOXIDE
(METHOXIDE OR METHOXIDES)

=> 12 and 13
L5 248 L2 AND L3

=> 12 and 15
L6 248 L2 AND L5

=> superficial velocity
22021 SUPERFICIAL
4 SUPERFICALS
22022 SUPERFICIAL
(SUPERFICIAL OR SUPERFICALS)
338194 VELOCITY
65747 VELOCITIES
371079 VELOCITY
(VELOCITY OR VELOCITIES)
L7 1657 SUPERFICIAL VELOCITY
(SUPERFICIAL (W) VELOCITY)

=> 16 and 17
L8 0 L6 AND L7

=> mthanol
0 MTHANOL
L9 0 MTHANOL

=> methanol
178324 METHANOL
673 METHANOLS
L10 178677 METHANOL
(METHANOL OR METHANOLS)

=> 15 and 110
L11 207 L5 AND L10

=> d 111 197-207 ti

L11 ANSWER 197 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Synthesis of methanol and derived compounds by homogeneous
Fischer-Tropsch-type reactions

L11 ANSWER 198 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Electrochemical synthesis of N-alkylformamides

L11 ANSWER 199 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Homogeneous catalysis of carbon monoxide hydrogenation

L11 ANSWER 200 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Homogeneous carbon monoxide hydrogenation to

methanol catalyzed by soluble ruthenium complexes

L11 ANSWER 201 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Oxalic acid esters

L11 ANSWER 202 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Catalyst for the preparation of alkyl ester of formic acid

L11 ANSWER 203 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methyl formate

L11 ANSWER 204 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methyl formate

L11 ANSWER 205 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Synthesis of methanol at low pressures

L11 ANSWER 206 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Catalytic manufacture of methyl formate

L11 ANSWER 207 OF 207 CAPLUS COPYRIGHT 2005 ACS on STN
TI Synthesis of methyl formate from methanol and carbon monoxide at high pressure using alkali activated charcoal as catalyst

=> potassium methoxide
558083 POTASSIUM
15 POTASSIUMS
558085 POTASSIUM
(POTASSIUM OR POTASSIUMS)
11064 METHOXIDE
393 METHOXIDES
11230 METHOXIDE
(METHOXIDE OR METHOXIDES)
L12 619 POTASSIUM METHOXIDE
(POTASSIUM (W) METHOXIDE)

=> l11 and l12
L13 17 L11 AND L12

=> d l13 1-17 ti

L13 ANSWER 1 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Low-temperature methanol synthesis in catalytic systems composed of copper-based oxides and alkali alkoxides in liquid media: effects of reaction variables on catalytic performance

L13 ANSWER 2 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI One-step synthesis of methanol from CO/H₂ at low temperature over ultrafine CuB catalysts

L13 ANSWER 3 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI In situ FTIR study on reaction pathways in Ni(CO)₄/CH₃OK catalytic system for low-temperature methanol synthesis in a liquid medium

L13 ANSWER 4 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methyl formate, its continuous production and device therefor

L13 ANSWER 5 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Study on activity of alkali methoxide catalysts for carbonylation of methanol

L13 ANSWER 6 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Selective formation of methanol over nickel carbonyl with

potassium methoxide

L13 ANSWER 7 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Hydrogenation catalysts for manufacture of **methanol**, their preparation method, and manufacture of **methanol**

L13 ANSWER 8 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Studies on a new catalytic system for heterogeneous carbonylation of **methanol** to methyl formate

L13 ANSWER 9 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Preparation of methyl formate by carbonylation of **methanol** with decreased catalyst losses

L13 ANSWER 10 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Slurry phase synthesis of **methanol** with a **potassium methoxide**/copper chromite catalytic system

L13 ANSWER 11 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI A novel synthesis of **methanol**

L13 ANSWER 12 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Process for combined production of **methanol**/methyl formate and power

L13 ANSWER 13 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Kinetic parameters in the carbonylation step of the low temperature synthesis of **methanol**

L13 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Selective homogeneous production of alkyl formate from **carbon monoxide** and alcohol using metal carbonyl/alkoxide catalyst systems

L13 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Homogeneous catalysis of methyl formate production from **carbon monoxide** and **methanol** in the presence of metal carbonyl catalysts

L13 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI A convenient route to carbon-13-enriched triruthenium dodecacarbonyl. Chemistry relevant to methyl formate production from **carbon monoxide** and **methanol**

L13 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Methyl formate

=> d 113 14-17 ti fbib abs

L13 ANSWER 14 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN
TI Selective homogeneous production of alkyl formate from **carbon monoxide** and alcohol using metal carbonyl/alkoxide catalyst systems
AN 1988:528300 CAPLUS
DN 109:128300
TI Selective homogeneous production of alkyl formate from **carbon monoxide** and alcohol using metal carbonyl/alkoxide catalyst systems
AU Darensbourg, Donald J.; Gray, Robert L.; Ovalles, Cesar
CS Dep. Chem., Texas A and M Univ., College Station, TX, 77843, USA
SO Journal of Molecular Catalysis (1987), 41(3), 329-47
CODEN: JMCADS; ISSN: 0304-5102
DT Journal
LA English

OS CASREACT 109:128300

AB HCO₂R (R = alkyl) production from ROH and CO catalyzed by homogeneous transition metal carbonyl complexes in the presence of alkali metal alkoxides is reported. A significant increase in the number of turnovers of this reaction by Group VI metal carbonyl/alkoxide catalysts over the alkali metal alkoxide-catalyzed process is due to the dual role of the metal carbonyl to provide a more electrophilic CO source and to promote the removal of trace H₂O impurities via water-gas shift chemical. The key intermediate in the proposed catalytic cycle is a short-lived metallo-ester derivative, which at >100° is protonated by ROH to give HCO₂R. The reactivity of the metal carbonyl with alkali metal alkoxides is affected sharply by the solvent system used; e.g., THF is much more effective than ROH. Similarly, reaction of Ru₃(CO)₁₂ with ROH in the presence of alkoxides and CO also gave HCO₂R. In addition, a convenient route to ¹³CO-enriched Ru₃(CO)₁₂ is achieved in the presence of trace amts. of alkoxides. In the absence of CO, XRu₃(CO)₁₀Y (X = H, OR; Y = OR) derivs. are produced by direct reaction of Ru₃(CO)₁₂ with ROH.

L13 ANSWER 15 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

TI Homogeneous catalysis of methyl formate production from carbon monoxide and methanol in the presence of metal carbonyl catalysts

AN 1985:595807 CAPLUS

DN 103:195807

TI Homogeneous catalysis of methyl formate production from carbon monoxide and methanol in the presence of metal carbonyl catalysts

AU Dahrensbourg, Donald J.; Gray, Robert L.; Ovalles, Cesar; Pala, Magdalena

CS Dep. Chem., Texas A and M Univ., College Station, TX, 77843, USA

SO Journal of Molecular Catalysis (1985), 29(2), 285-90

CODEN: JMCADS; ISSN: 0304-5102

DT Journal

LA English

OS CASREACT 103:195807

AB Homogeneous W and Ru carbonyl derivs., e.g., Et₄N[HW₂(CO)₁₀], W(CO)₆/KOMe, catalyzed the preparation of HCO₂Me from CO and MeOH.

L13 ANSWER 16 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

TI A convenient route to carbon-13-enriched triruthenium dodecacarbonyl. Chemistry relevant to methyl formate production from carbon monoxide and methanol

AN 1985:6786 CAPLUS

DN 102:6786

TI A convenient route to carbon-13-enriched triruthenium dodecacarbonyl. Chemistry relevant to methyl formate production from carbon monoxide and methanol

AU Dahrensbourg, Donald J.; Gray, Robert L.; Pala, Magdalena

CS Dep. Chem., Texas A and M Univ., College Station, TX, 77843, USA

SO Organometallics (1984), 3(12), 1928-30

CODEN: ORGND7; ISSN: 0276-7333

DT Journal

LA English

OS CASREACT 102:6786

AB The enhanced CO lability exhibited by Ru₃(CO)₁₂ in the presence of KOMe, where methoxycarbonyl adduct formation occurs, was used in the ready synthesis of highly ¹³C-enriched Ru₃(CO)₁₂. The methoxycarbonyl adduct is in equilibrium with Ru₃(CO)₁₂ in MeOH or MeOH-THF in the absence of added OMe-, indicative of substantial electrophilic character in the CO ligands of this trinuclear cluster. The possible role of this methoxycarbonyl adduct in the catalytic synthesis of HCO₂Me from CO-MeOH is discussed.

L13 ANSWER 17 OF 17 CAPLUS COPYRIGHT 2005 ACS on STN

TI Methyl formate

AN 1974:463162 CAPLUS

DN 81:63162

TI Methyl formate
IN Wakamatsu, Hachiro; Shimomura, Koichi
PA Ajinomoto Co., Inc.
SO U.S., 4 pp.
CODEN: USXXAM
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 3816513	A	19740611	US 1971-178933	19710909
				US 1971-178933	A 19710909

AB Me formate was produced continuously by reaction of CO with MeOH over KOMe. Sufficient H was present to convert the excess CO to MeOH, which was recycled to the reactor.

=>

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	55.56	62.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.92	-2.92

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 07:55:28 ON 06 MAY 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 08:05:39 ON 06 MAY 2005
FILE 'CAPLUS' ENTERED AT 08:05:39 ON 06 MAY 2005
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	55.56	62.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.92	-2.92

=> logoff hold

COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	55.56	62.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.92	-2.92

SESSION WILL BE HELD FOR 60 MINUTES

STN INTERNATIONAL SESSION SUSPENDED AT 08:05:47 ON 06 MAY 2005

Connecting via Winsock to STN

Welcome to STN International! Enter x:x

LOGINID:SSSPTA1623PAZ

PASSWORD:

* * * * * RECONNECTED TO STN INTERNATIONAL * * * * *
SESSION RESUMED IN FILE 'CAPLUS' AT 08:30:59 ON 06 MAY 2005
FILE 'CAPLUS' ENTERED AT 08:30:59 ON 06 MAY 2005
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COST IN U.S. DOLLARS	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	55.56	62.64
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.92	-2.92

=> d his

(FILE 'HOME' ENTERED AT 07:31:53 ON 06 MAY 2005)

FILE 'REGISTRY' ENTERED AT 07:32:08 ON 06 MAY 2005
E METHYL FORMATE/CN

L1 1 E3

FILE 'CAPLUS' ENTERED AT 07:32:53 ON 06 MAY 2005

L2 833 L1/PREP
L3 140565 CARBON MONOXIDE
L4 11230 METHOXIDE
L5 248 L2 AND L3
L6 248 L2 AND L5
L7 1657 SUPERFICIAL VELOCITY
L8 0 L6 AND L7
L9 0 MTHANOL
L10 178677 METHANOL
L11 207 L5 AND L10
L12 619 POTASSIUM METHOXIDE
L13 17 L11 AND L12

=> l2 and l7

L14 0 L2 AND L7

=> carbonylation

L15 10971 CARBONYLATION
172 CARBONYLATIONS
11007 CARBONYLATION
(CARBONYLATION OR CARBONYLATIONS)

=> l7 and l15

L16 2 L7 AND L15

=> d l16 1-2 ti

L16 ANSWER 1 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
TI Catalytic carbonylation method for the manufacture of acetic
acid from methanol and carbon dioxide using a bubble-column reactor

L16 ANSWER 2 OF 2 CAPLUS COPYRIGHT 2005 ACS on STN
TI Mathematical modeling of low-temperature liquid phase methanol synthesis

process in a bubble slurry reactor

=> l3 and l4
L17 285 L3 AND L4

=> l7 and l17
L18 0 L7 AND L17

=> logoff hold
COST IN U.S. DOLLARS

FULL ESTIMATED COST

DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)

CA SUBSCRIBER PRICE

	SINCE FILE ENTRY	TOTAL SESSION
FULL ESTIMATED COST	62.14	69.22
DISCOUNT AMOUNTS (FOR QUALIFYING ACCOUNTS)	SINCE FILE ENTRY	TOTAL SESSION
CA SUBSCRIBER PRICE	-2.92	-2.92

SESSION WILL BE HELD FOR 60 MINUTES
STN INTERNATIONAL SESSION SUSPENDED AT 08:36:28 ON 06 MAY 2005